Amendment Dated October 16, 2006 Reply to Office Action of June 15, 2006

AMENDMENTS TO THE SPECIFICATION

In the specification at page 9 line 13, please replace the paragraph which starts with "A further quadrupole" with the following amended paragraph:

A further quadrupole following Q1 (= II or Q2) serves as a collision chamber. Therein, the ions are advantageously fragmented by applying a fragmentation voltage. For the fragmentation, ionization potentials in the range of 5-11 electron volts (eV), preferably of 8-11 electron volts (eV), are applied. For the fragmentation in the process according to the invention, Q2 is also filled with a collision gas such as a noble gas such as argon or helium, or another gas such as CO_2 or nitrogen, or mixtures of these gases such as argon/helium or argon/nitrogen. For reasons of cost, preference is given to argon and/or nitrogen. In the collision chamber, the collision gas in the process according to the invention is preferably present at a pressure of from 1×10^{-5} to 1×10^{-1} torr, preferably 10^{-2} torr@@@@ torr. Particular preference is given to nitrogen. Even without the application of a fragmentation voltage, there may be isolated fragmentation of the ions in the collision chamber in the presence of a collision gas. Between the quadrupole Q1 and Q2, further quadrupoles or cones may be present to direct the ions.

Please delete the paragraph added by preliminary amendment at page 16, line 26, beginning with "Other embodiments and advantages of the invention are set forth"